PT 4000
Electrical Safety Test in the USA and Canada according to CAN/CSA - 22.2 No. 601.1 - M90

1 Visual inspection of basic unit

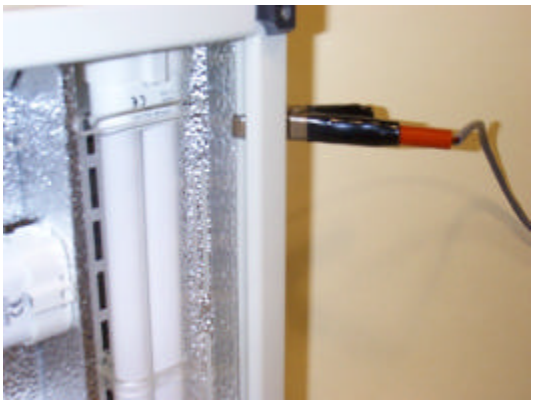
- Power cord
- Compare fuses to stated ratings of the PT 4000.
- Check position of voltage selector switch (120 - 127 VAC for US units)

2 Safety testing PT 4000 with DNI Nevada Model µ-Test 2000

- **Warning**: These tests can expose personnel to hazardous electric shock and must be carried out with caution.
- Note: Do not plug the µ-Test 2000 safety analyzer power cord into a line isolation monitor as inaccurate readings may occur.
- Ensure that the switch "TEST LOAD" on the backside of the µ-Test 2000 is in the "IEC 601-1" position.
- Plug the µ-Test 2000 power cord into a live AC receptacle, place the power switch of the µ-Test 2000 to the "1" or ON position and ensure that switches marked "NEUTRAL" and "POLARITY" are in the OFF or CLOSED position.

2.1 Chassis Resistance Testing

- Rotate "MODE" knob to "OHM RESISTANCE" position.
- Attach test lead to "CHASSIS CABLE" input of the tester.
- Plug the PT 4000 power cord into the test receptacle of the µ-Test 2000.
- Attach alligator clip to the PT 4000 so that it becomes contact to the inner grounded reflector:



- The resistance reading then shown on the µ-Test 2000 is the "Chassis Resistance". Bend and exercise the power cord to check for intermittent reading.
- Maximum allowable test value:

Chassis Resistance	0.2 Ohm

2.2 Enclosure Leakage Current (Chassis Leakage Testing)

- Rotate "MODE" knob to "CHASSIS" position.
- Switch "POLARITY" switch to "NORMAL" position.
- Switch on PT 4000 with both switches.
- Set up the µ-Test 2000 for the following tests by using the switches labeled "Ground" and "Polarity".
- This is a measurement of the leakage current from the Chassis to earth ground.
- Be sure to pause the "POLARITY" switch in the center-off position before changing polarity.
- Maximum allowable test values under Normal Condition:

Normal Ground, Normal Polarity, Closed Neutral:	100 µA
Normal Ground, Reverse Polarity, Closed Neutral:	100 µA

(According to CAN/CSA - 22.2 No. 601.1 - M90, Sub-clause 19.3, Table IV)

- Maximum allowable test values under Single Fault Condition:

Open Ground, Normal Polarity, Closed Neutral:	500 µA, but not 0 µA
Open Ground, Reverse Polarity, Closed Neutral:	500 µA, but not 0 µA

(According to CAN/CSA - 22.2 No. 601.1 - M90, Sub-clause 19.3, Table IV)

2.3 Earth Leakage Current (Ground Wire Leakage Testing)

- Remove the red lead with the alligator clip from the PT 4000.
- Leave all other selections from the previous test the same.
- The PT4000 is still switched on.
- Rotate "MODE" knob to "EARTH" position
- Set up the µ-Test 2000 for the following tests by using the switches labeled "Neutral" and "Polarity".
- Important: Do not press "OPEN GROUND" pushbutton.
- This is a measurement of the leakage current flowing through the ground wire of the power cord.
- Be sure to pause the "POLARITY" switch in the center-off position before changing polarity.
- Maximum allowable test values under Normal Condition:

(Open Ground), Normal Polarity, Closed Neutral:	500 µA, but not 0 µA
(Open Ground), Reverse Polarity, Closed Neutral:	500 µA, but not 0 µA

(According to CAN/CSA - 22.2 No. 601.1 - M90, Sub-clause 19.3, Table IV)

- Maximum allowable test values under Single Fault Condition:

(Open Ground), Normal Polarity, Open Neutral:	1000 µA
(Open Ground), Reverse Polarity, Open Neutral:	1000 µA

(According to CAN/CSA - 22.2 No. 601.1 - M90, Sub-clause 19.3, Table IV)

- Switch off unit with both switches.

- Maximum allowable test values under Normal Condition, PT 4000 switched off:

(Open Ground), Normal Polarity, Closed Neutral:	500 µA, but not 0 µA
(Open Ground), Reverse Polarity, Closed Neutral:	500 µA, but not 0 µA

  (According to CAN/CSA - 22.2 No. 601.1 - M90, Sub-clause 19.3, Table IV)
  Rationale: On/Off switches are standby switches. The earth leakage current in normal condition may be higher with standby switches in off position.

- Disconnect power cord from the µ-Test 2000 and remove the test equipment